

## 7.4 Notes: Properties of Quadrilaterals

A \_\_\_\_\_ is a quadrilateral with both pairs of opposite sides parallel.

A \_\_\_\_\_ is a quadrilateral with four right angles.

A \_\_\_\_\_ is a quadrilateral with four congruent sides.

A \_\_\_\_\_ is a quadrilateral with four right angles and four congruent sides.

### **Parallelograms:**

If parallelogram, then \_\_\_\_\_.

If parallelogram, then \_\_\_\_\_.

If parallelogram, then \_\_\_\_\_.

If parallelogram, then \_\_\_\_\_.

If parallelogram, then \_\_\_\_\_.

### **Rectangles:**

The 5 properties of a parallelogram, plus...

If rectangle, then \_\_\_\_\_.

If rectangle, then \_\_\_\_\_.

### **Rhombi:**

The 5 properties of parallelograms, plus...

If rhombus, then \_\_\_\_\_.

If rhombus, then \_\_\_\_\_.

If rhombus, then \_\_\_\_\_.

### **Squares:**

The 5 properties of **parallelograms**, plus...

The 2 properties of **rectangles**, plus...

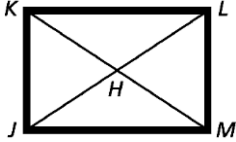
The 3 properties of **rhombi**, plus...

If square, then \_\_\_\_\_.

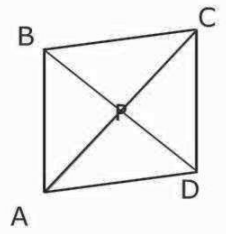
If square, then \_\_\_\_\_.

Examples:

1. A woodworker constructs a rectangular picture frame so that  $JK = 50$  cm and  $JL = 86$  cm. Find the length of  $HM$ .



2. ABCD is a **rhombus**. Use the given side lengths to solve for  $x$ .

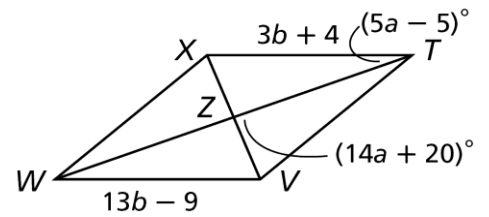


$$\overline{BA} = (5x - 11)$$

$$\overline{AD} = (6x - 18)$$

3. TVWX is a **rhombus**.

a. Find TV.



b. Find  $m\angle VTZ$ .